Asunto: UFTO Note-Powercosm: George Gilder Brings a New Paradigm to Power
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UFTO Note- Powercosm: George Gilder Brings a New Paradigm to Power

Here's some "big picture" stuff. George Gilder, who's staked himself a huge role as prophet of the internet, is now tackling energy as well, with the help of two longtime energy industry figures. There are some challenging ideas here for all of us.

If you have the patience,

Part 1 gives a flavor of his influence and view of the internet.
Part 2 is the announcement of a new conference "Powercosm".
Part 3 is a beginning guide to the basic thrust of the argument that "power," i.e. electrical energy, will be networked much like data is today.

" . . . the single most powerful new technology investment opportunity for the next five years… Electricity in the digital age of silicon powerchips."

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Part 1. Excerpts from an article in the current (March 25) issue of the Economist, page 73:

" . . . Mr Gilder reflects on the revolution in progress today. And while he thinks, America waits with baited breath.

It is known as the "Gilder effect." Sometime in the first half of each month, an e-mail emerges announcing the imminent arrival of the next utterance. At the appointed hour, tens of thousands mob his website. Those who get through to the server speed-read eight pages of technology, then scan a list of firms. Having noted an addition here, an omission there, it is off to the day-trader races. In the past year, Novell, Qualcomm, JDS Uniphase, Terayon Communication, TeraBeam and others have seen their reputations soar within minutes of publication of the Gilder Technology Report.

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Mr Gilder is America's foremost technology prophet, a reputation he earned with "Microcosm", published in 1989, a book on the implications of the semiconductor revolution. Yet it is still odd that his words have such immediate impact.

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The market-moving is relatively recent, dating back only a year or so. His influence on the technology industry goes back much farther. It stems from Mr Gilder's chief insight about technology, which itself stemmed from his experience as one of the architects of Ronald Reagan's supply-side economic views. (One of Mr Gilder's many incarnations: others include political speechwriter and controversial author on such topics as sex and race.)

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It is all, inevitably, about supply and demand. Mr Gilder's insight was to spot the transition from the age of computing to that of networks. What was scarcest in the computer era (bandwidth, or network capacity) would soon become cheap and abundant. And what was once abundant (big computing's power, transistors and space) would become relatively scarce, in an increasingly mobile world of small, rather simple devices connected to others using a ubiquitous network.

Moore's law predicted that, for any given price, computer-processing power would double every 18 months. Its lesson, says Mr Gilder, was "waste transistors". That meant building software and businesses on the assumption that computing power would be virtually free; the transistors we "waste" to play PC solitaire exceed what NASA could muster when it launched its Apollo missions. Gilder's law says that communications capacity will triple every 12 months. And his corollary is "waste bandwidth". As communications become cheap, work will shift from smart devices to a swarm of interconnected, dumber ones that are tiny and cheap.

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What distinguishes him from other wired pundits is his understanding of the technology, from the atomic level of semiconductors to the economics of wire-laying. He does his homework, seeking out engineers sooner than company bosses, and grilling them in excruciating detail.

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He credits his insights to the advice of his academic mentor, the semiconductor pioneer Carver Mead: "listen to the technology". But with the world's markets echoing to the sound of his own voice, that gets harder all the time."

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Part 2. Powercosm

The conference was first announced to Gilder's "Telecosm" 60,000 subscribers, and is modelled after the conference by that name that he's held annually for 3 years. Unfortunately for the rest of us, Powercosm sold out in the first two days, and wasn't promoted in other circles.

I'm told the conference operates very differently from most we've all been to. It's limited to 250 registered attendees. The speakers are the CEO's and movers and shakers in companies that are leading the changes that are the conference theme. There is a lot of discussion, debate and participation.

http://www.powercosm.com/conference.htm

From the desk of: George Gilder

Thank you for your interest in my upcoming conference, Powercosm™: Powering the Telecosm, to be held at the Coronado Island Marriott Resort in San Diego, CA, June 14-16.

Just as I did 3 years ago with my Telecosm Paradigm, I have decided to launch and devote an entire conference to a new paradigm, the Powercosm™. It may just be the most important event for technology investors this year. (And that's saying a lot. It's going to be a great year!)

The real purpose of this conference is to get my subscribers in EARLY--no Yahooers need apply--on what I consider the single most powerful new technology investment opportunity for the next five years… Electricity in the digital age of silicon powerchips.

The Telecosm and the Internet Economy will make the broad electric technology sector one of the most dynamic investment sectors in the economy (reaching below and beyond the realm of traditional electric utilities). We stand at the threshold of technology-driven changes in power as deep and profound as those that began the telecom revolution two decades ago. And that's the reason why you have to come to San Diego!

I'm creating the Powercosm™ conference in partnership with my good friend, Peter Huber, and his colleague, another brilliant technologist, Mark Mills. Together, they edit the newly launched Digital Power Report, a monthly investment strategy report published by Gilder Publishing. (If you haven't already seen the premier issue, download a free copy here.)

Peter and Mark are today's premier authorities on "powering the information age." Their prescient and groundbreaking analysis, delivered monthly in the Digital Power Report, will help you uncover emerging investment opportunities in an industry poised for unprecedented growth in the next few years.

And the Powercosm™ conference will be the kick-off event for this new paradigmatic investment opportunity. Limited to only 200 top investors and business leaders, the conference will feature an overview of the paradigm itself, followed by specific presentations on Powerchip Fabricators, Powerchip Integrators, Network Technologies, the "High-Nine" Power Technologies, and Overall Technology Integrators. I have no doubt that in the coming decade of the Powercosm™, there will emerge companies that are the technological analogs of Intel, Oracle, AMD, AOL and Qualcomm.

We will feature Peter Huber and Mark Mills (as well as your humble servant) as speakers and panelists, of course. But equally important for you, we will highlight discussions by and with the leading players within the new, wide open Powercosm™, including top business leaders from the new and emerging market leaders such as American Power Conversion, Silicon Power, Emerson Electric, American Superconductor, Surepower, Capstone, Calpine, CREE, and many others-many of which you may not have heard of before.

George Gilder

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Part 3. A Beginning Guide

On the Powercosm homepage (http://www.powercosm.com/) there is also an invitation to subscribe to a new monthly newsletter "The Digital Power Report", by Peter Huber and Mark Mills. (Mark will be familiar to many of you from his long involvement with electrotechnologies.) The free Inaugural issue, available for download from the website, is titled "The PowerChip Paradigm." Under "articles" there are also a number of columns the authors did for Forbes Magazine, and other work including Congressional testimony.

Drastically oversimplifying, the ideas are:

1. The devices that make up the internet (the boxes) use a lot of electric power, as much as 8% of the entire US consumption. There are other complicated effects, e.g. economic growth, efficiencies, wealth effects, reduced reliance on oil, etc. Mill's Congressional testimony in particular presents one side of quite heated (sorry for the pun) arguments. The opposing view would have it that the internet doesn't result in an increase in energy use at all, and thus is a great friend to the environment.

2. The internet infrastructure requires a far higher quality of power than we're accustomed to -- many 9's of reliability -- and this demand is much better supplied with "short wire" devices, that is, distributed resources providing generation and storage close to the load.

3. This is the big conceptual blockbuster. Most of us think of "bits" as being "virtual." They do, however, have a physical reality. Electrons (or photons) must move in order for the bits to go from one place to another.

The basic physics of moving small numbers of electrons is not fundamentally different from moving large numbers of electrons. And in fact, the silicon devices to switch, control and move large amounts of power are evolving rapidly.

PowerChips will soon make it possible to handle enable power in much the same way as bits are handled today; power will be managed in packets sent along a switched network "grid".

The conventional view is that the transmission grid is more like the gas pipeline system -- a big, physical structure. This analogy is wrong. Gas pipelines move stuff -- molecules. Electrons, in small or large batches, are different.

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So there you have it. "Ah- Ha!" or "huh?"